

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance. The present amendment is being made to facilitate prosecution of the application.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 40- 71 are pending in this application. Claims 40, 46, 54, 59, 62, and 69 are independent. Claims 40, 44, 46, 61, and 71 are hereby amended. Claims 54-58 and 62-68 are allowable. Claims 1-39 have been previously canceled without prejudice or disclaimer of subject matter. No new matter has been introduced by this amendment. Support for this amendment is provided throughout the Specification. Changes to claims are not made for the purpose of patentability within the meaning of 35 U.S.C. §101, §102, §103, or §112. Rather, these changes are made simply for clarification and to round out the scope of protection to which the Applicants are entitled.

II. REJECTIONS UNDER 35 U.S.C. §112

Claims 44, 61, and 71, which were rejected under 35 U.S.C. §112 as allegedly indefinite, are hereby amended, obviating the rejection.

III. REJECTIONS UNDER 35 U.S.C. §102(e)

Claims 40, 41, 46, 47, 49, and 51 were rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent No. 6,108,349 to Melsa, et al. (hereinafter, merely "Melsa")

Claim 40 recites, *inter alia*:

“a plurality of analog devices together configured and adapted for sequentially performing an analog multiplication and then an analog convolution on an analog signal...

...said OFDM telecommunication device is configured and adapted to feed said IF analog signal to an A/D converter via zero or more processing stages, without further down-conversion.”
(emphasis added)

As understood by Applicants, Melsa relates to registering remotes units with a multipoint communications system.

Applicants submit Melsa does not teach or suggest the above-identified features of claim 40. Specifically, Applicants submit that Melsa fails to teach that a plurality of analog devices together configured and adapted for sequentially performing an analog multiplication and then an analog convolution on an analog signal and the OFDM telecommunication device is configured and adapted to feed said IF analog signal to an A/D converter via zero or more processing stages, without further down-conversion, as recited in claim 40.

Therefore, claim 40 is patentable. Claims 61 and 71 are similar in scope and patentable for similar reasons.

Claim 46 recites, *inter alia*:

“...said OFDM telecommunication device is configured and adapted to feed said analog output signal to an A/D converter via zero or more processing stages, without further down-conversion.”
(emphasis added)

Applicants submit that Figure 7 of Melsa, a tuner 155 mixes a 470MHz - 750MHz signal having a frequency of about 240 MHz that is input to a SAW filter 165 (cf col. 8, lines 45 and 50-52). The output of SAW filter 165 (which could conceivably be interpreted as performing an analog convolution on the signal passing therethrough) is input to IF mixer 170

that transposes the [240MHz = RF] signal to an intermediate [10.7 MHz] frequency (cf. col. 8, lines 54-56 of Melsa).

In accordance with claim 46, a first analog device performs an analog multiplication as well as an RF/IF down-conversion thereon and outputs the resultant IF analog signal to a second analog device that performs an analog convolution. It follows from the literal teachings of Melsa that IF mixer 170, not tuner 155, should be equated with the first analog device of claim 46. In this case, the teaching of Melsa would not fall within the scope of claim 46 due to the limitation that the convolution follows the multiplication.

To better underline these fundamental distinctions between claim 46 and the teachings of Melsa, claim 46 has been amended to recite that the analog output signal resulting from the convolution is fed, without further down-conversion, to an A/D converter. Clearly, the 240 MHz signal output by the SAW filter 165 of Melsa does not lend itself to A/D conversion. The feature “via zero or more processing stages” emphasizes that the analog output signal need not be directly fed from the second analog device to the A/D converter.

Therefore claim 46 is patentable.

Claims 59, 60, 69, and 70 were rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent No. 6,611,551 to Jones IV, et al. (hereinafter, merely “Jones”)

Claim 59 recites, inter alia:

“...a plurality of analog devices together configured and adapted for sequentially performing, in either order, an analog multiplication and an analog convolution on an analog signal,

wherein said multiplication of said analog signal provides up-conversion of an IF analog signal at an intermediate frequency to an RF analog signal at a radio frequency.” (emphasis added)

Applicants note that the Office Action rejects claims 59 and 60 with reference to transmit filter 106, RF components sections 108 and an RF components section 165 of Fig. 1 of Jones. In this respect, however, Applicants note that Jones makes no use of reference sign 165. It thus appears that the Office Action intended to refer solely to transmit filter 106 and to RF component sections 108.

In regard to transmit filter 106, Applicants note that col. 3, lines 39-41 of Jones explicitly teaches that transmit filter 106 is a digital device clearly incapable of the claimed analog convolution (on an analog signal).

While “unknown channel block” 108 is taught e.g. in col. 3, lines 44-57 of Jones as optionally encompassing analog SAW filters, Applicants submit that no teaching or suggestion in Jones regarding the use of these or other analog devices for performing an analog convolution (on an analog signal) as claimed.

Thus, in spite of the possible relevance of col. 3, lines 44-57 of Jones regarding analog processing of a signal during up/down-conversion, Applicants submit that Jones does not teach or suggest the features of claims 59 and 60. Specifically, Applicants submit that Jones fails to teach or suggest a plurality of analog devices together configured and adapted for sequentially performing, in either order, an analog multiplication and an analog convolution on an analog signal, wherein said multiplication of said analog signal provides up-conversion of an IF analog signal at an intermediate frequency to an RF analog signal at a radio frequency, as recited in claim 59.

IV. DEPENDENT CLAIMS

The other claims in this application are each dependent from one of the independent claims discussed above and are therefore believed patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

CONCLUSION

In the event the Examiner disagrees with any of statements appearing above with respect to the disclosure in the cited references, it is respectfully requested that the Examiner specifically indicate the portion, or portions, of the reference, or references, providing the basis for a contrary view.

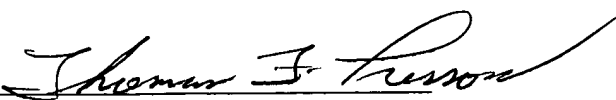
In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable and Applicants respectfully request early passage to issue of the present application.

Please charge any additional fees that may be needed, and credit any overpayment, to our Deposit Account No. 50-0320.

Respectfully submitted,

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